

Editorial



Detlef Günther

Mass Spectrometry has become one of the essential analytical techniques for the identification and/or quantification of analytes from elements and species to a variety of macromolecules including proteins and oligonucleotides and many more. Since the early days of J. J. Thomson and F. W. Aston (<http://www.nobelprize.org/>) who discovered the isotopes of neon almost a century ago, mass spectroscopy has evolved into a mature analytical technique also recently rewarded in 2002 by the Nobel Committee for the analysis of large biomolecules. The field is characterized by continuous innovation in hardware development including ionization sources, mass analyzers and software tools as well as applications with strong impact in various fields including biology, chemistry, material sciences, environmental sciences, and pharmaceutical sciences. From August 24–29, 2014, the 20th International Mass Spectrometry Conference (IMSC214) will be held for the first time in Switzerland, in Geneva and will be chaired by Prof. Renato Zenobi and co-chaired by Dr. Marc Suter (www.imsc2014.ch).



Gérard Hopfgartner

Switzerland has a strong mass spectrometry community including industrial and academic scientists represented by the active Swiss group of mass spectrometry (SGMS), which is a collective member of the Swiss chemical society.

This special issue contains twelve contributions dedicated to Mass Spectrometry in Switzerland and provides a selective snapshot of the high quality and variety of on-going MS research and developed applications from all over Switzerland. **U. Schaltegger** presents mass spectrometry in Earth sciences: the precise and accurate measurement of time. The research group of **D. Günther** describes element analysis of small and even smaller objects by inductively coupled plasma mass spectrometry (ICPMS) and laser ablation–ICPMS. The **R. Zenobi** group summarizes their achievements in fundamental/mechanistic research, instrument and methods development, and applications. **M. Kussmann** reports the determination by LC-MS/MS of the bioavailability of vitamin E from self-assembly structures in patients with diagnosed chronic pancreas insufficiency. **R. Knochenmuss** investigated the comparison of UHPLC-ESI-MS and Hadamard transform atmospheric pressure ion mobility-ESI-MS for rapid profiling of isomeric flavonoids. **M. Suter** provides an overview of mass spectrometry in environmental toxicology. **M. Stoeckli** describes for the first time a new hardware development: iMatrixSpray: a free and open source sample preparation device for mass spectrometric imaging. The group of **G. Hopfgartner** presents some results on Liquid Extraction Surface Analysis (LESA) of hydrophobic TLC Plates coupled to chip-based nanoelectrospray high-resolution mass spectrometry. **R. Kipfer** reports on conquering the outdoors with on-site mass spectrometry. The elucidation of nucleic acid–drug interactions by tandem mass spectrometry is reported by **S. Schuerch**. High- to super-resolution mass spectrometry is addressed by a contribution from **Y. Tsybin** and 50 years of mass spectrometry at Firmenich: a continuing love story is presented by **L. Wünsche**. More of such exciting work and most novel developments in mass spectrometry will be presented by national and international presenters from all over the world next August in Geneva.

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